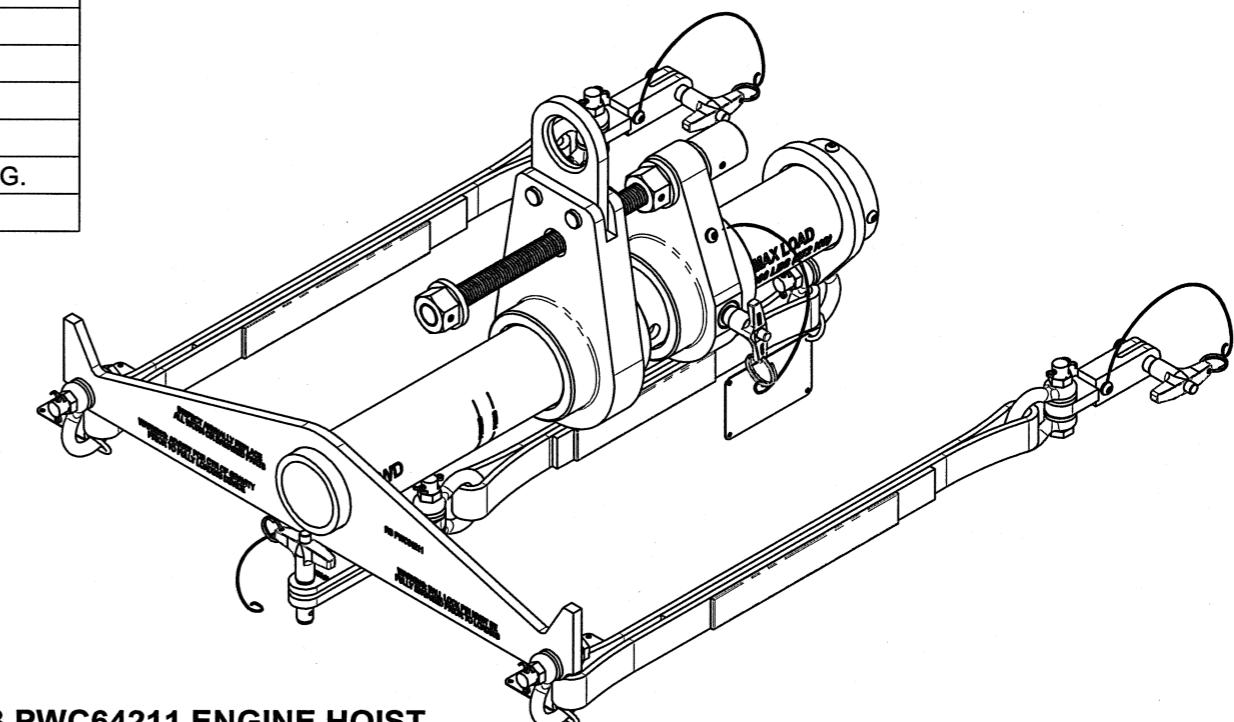


ITEM #	QTY	PART #	PART TITLE
-1	1	RB PWC64211-1	FRAME WELDMENT
-9	1	RB PWC64211-9	LIFT ASSY
-17	1	RB PWC64211-17	ANCHOR
-19	1	RB PWC64211-19	FRAME AFT END
-21	1	RB PWC64211-21	ENGINE HOIST
-23	1	RB PWC64211-23	KNOB
-25	1	RB PWC64211-25	SCREW
34	2	RB PWC64844	LIFTING STRAP ASSY
35	1	RB PWC64845	LIFTING STRAP ASSY
36	1	McMaster#90312A288 OR EQUIV	STEEL NYLON COATED LANYARD LOOP TO EYE 3/64" DIA. X 6" LG.
37	1	McMaster#31435A213 OR EQUIV	STEEL PRESS-FIT DRILL BUSHING WITH HEAD 0.5" I.D X 3/4" O.D X 29/32" LG.
38	2	McMaster#91030A035 OR EQUIV	BLACK OXIDE STEEL FLANGE NUT 5/8"-11
39	2	McMaster#90692A725 OR EQUIV	STEEL ZINC PLATED SLOTTED SPRING PIN 3/16" DIA. X 1" LG.
40	2	McMaster#8492A235 OR EQUIV	STEEL PRESS-FIT DRILL BUSHING WITH HEAD 0.4375" ID. X 5/8" OD. X 1/2" LG.
41	1	McMaster#91255A261 OR EQUIV	STEEL BLACK OXIDE BUTTON HEAD HEX DRIVE SCREW #10-32 X 1/4" LG.
42	2	McMaster#98306A273 OR EQUIV	STEEL CLEVIS PIN 3/8" DIA. X 1-1/4" USABLE LENGTH
43	2	McMaster#3088A511 OR EQUIV	STEEL ROUND SHIM 0.125" THK. X 3/8" ID.
44	2	McMaster#98338A473 OR EQUIV	STEEL ZINC PLATED COTTER PIN 1/8" DIA. X 3/4" LG.
45	1	McMaster#98296A911 OR EQUIV	STEEL SLOTTED SPRING PIN 3/16" DIA. X 1-1/8" LG.
46	4	McMaster#91255A244 OR EQUIV	STEEL BLACK OXIDE BUTTON HEAD HEX DRIVE SCREW #10-24 X 5/8" LG.
47	1	ESSENTRA#CL-7-BLPT-4.00 OR EQUIV	T HANDLE BALL LOCK PIN 7/16" DIA. X 4" LG.



RB PWC64211 ENGINE HOIST

NOTES:

1) MATERIAL: N/A
2) HEAT TREAT: N/A
3) FINISH: N/A

4) TOLERANCES: X.X = +/- 0.1" / +/- 1°
X.XX = +/- 0.01" / +/- 0.5°
X.XXX = +/- 0.005" / +/- 0.1°
X.XXXX = +/- 0.0005" / +/- 0.05°

PARALLELISM, ECCENTRICITY AND SYMMETRY ABOUT ALL CENTER LINES = +/-0.005"

5) UNITS: INCHES UNLESS OTHERWISE NOTED

6) IDENTIFICATION: N/A

7) ASSEMBLE AS SHOWN

8) APPLY RETAINING COMPOUND LOCTITE 620 OR EQUIVALENT ON MATING SURFACES
THEN PRESS FIT ITEM 37 AND ITEMS 40 WITH ITEM -17, AND REMOVE EXCESS

9) TRANSFER DRILL HOLE THROUGH ITEMS 38 AND -25 AS SHOWN

10) APPLY RETAINING COMPOUND LOCTITE 620 OR EQUIVALENT ON MATING SURFACES
THEN PRESS FIT ITEMS 39 WITH ITEMS 38 AND ITEM -25, AND REMOVE EXCESS

11) APPLY RETAINING COMPOUND LOCTITE 620 OR EQUIVALENT ON MATING SURFACES
THEN PRESS FIT ITEM 45 WITH ITEM -23 AND ITEM -25, AND REMOVE EXCESS

12) APPLY RED THREADLOCKER LOCTITE 263/262 ON THREADS OF ITEM 46
THEN ASSEMBLE WITH ITEM -19 AND ITEM -1, AND REMOVE EXCESS

13) INSTALL ITEMS 46 HAND TIGHT

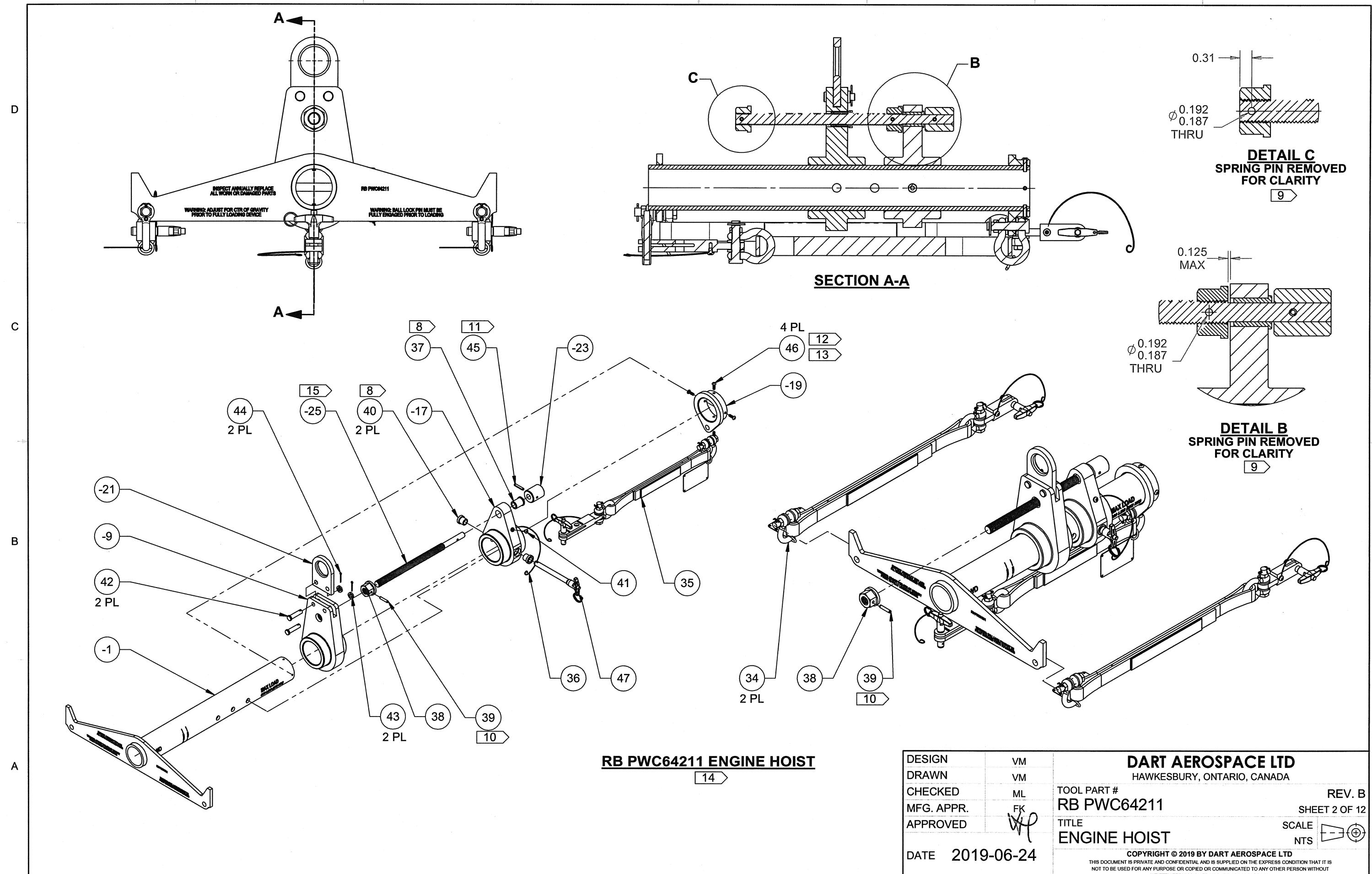
14) APPLY AEROSHELL 7 GREASE TO MOVING PARTS

15) ITEM -25 MUST ROTATE FREELY WHEN TURNED BY ITEM -23 KNOB

B	COMPLETE REDESIGN SEE PREVIOUS PDFs FOR OLDER REVs TEMPLATE UPDATED PER DART HBY STANDARDS	19-688	VM
REV.	DESCRIPTION	ECN #	BY
DESIGN	VM	DART AEROSPACE LTD	
DRAWN	VM	HAWKESBURY, ONTARIO, CANADA	
CHECKED	ML	REV. B	
MFG. APPR.	FK	TOOL PART #	
APPROVED	WJ	RB PWC64211	
DATE 2019-06-24		TITLE	
		SCALE	
		NTS	

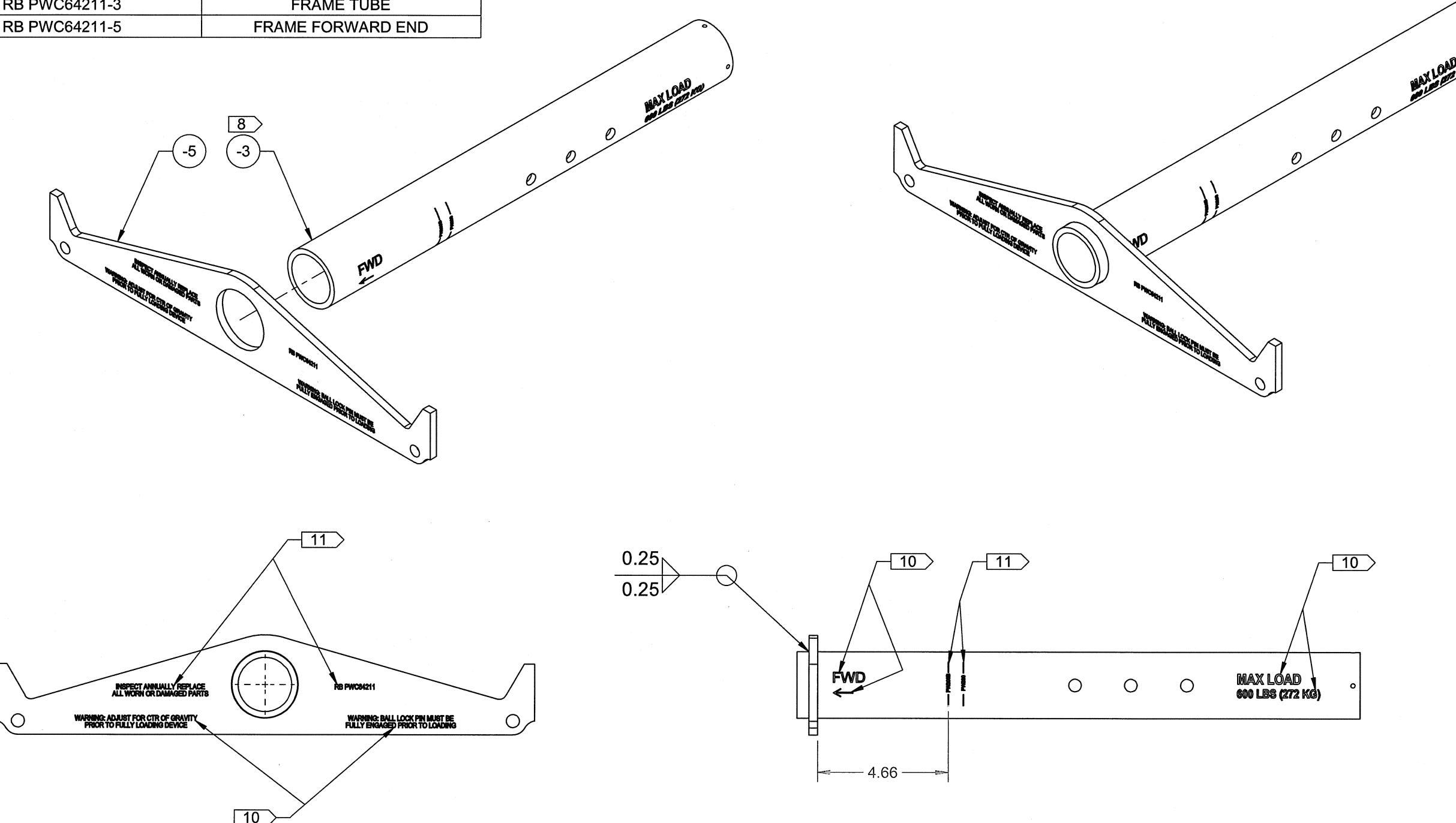
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ITEM #	QTY	PART #	PART TITLE
-3	1	RB PWC64211-3	FRAME TUBE
-5	1	RB PWC64211-5	FRAME FORWARD END



RB PWC64211-1 FRAME WELDMENT

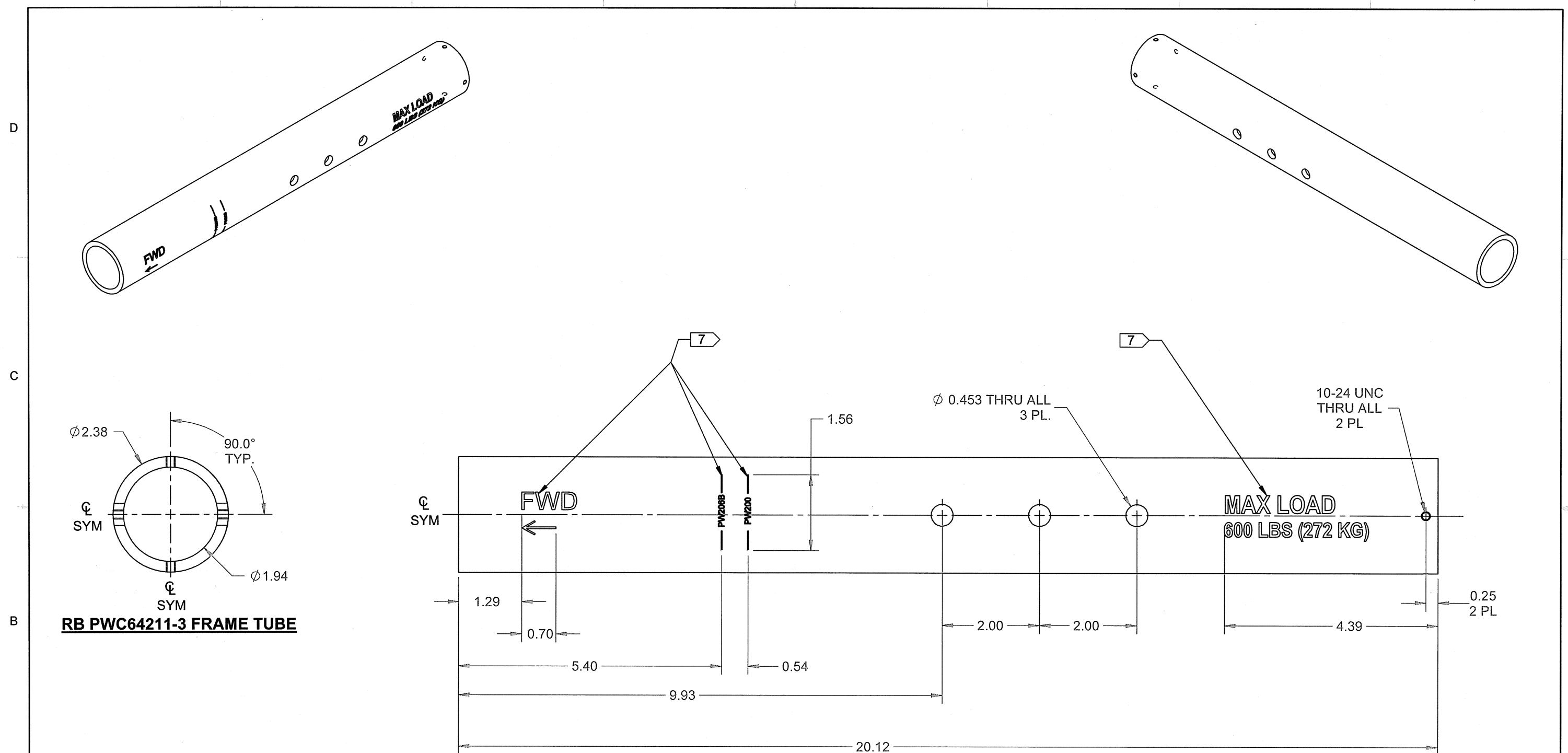
NOTES:

- 1) MATERIAL: N/A
- 2) HEAT TREAT: N/A
- 3) FINISH: ANODIZE BLACK PER MIL-A-8625 TYPE 2 CLASS 2
- 4) TOLERANCES: X.X = +/- 0.1" / +/- 1°
X.XX = +/- 0.01" / +/- 0.5°
X.XXX = +/- 0.005" / +/- 0.1°
X.XXXX = +/- 0.0005" / +/- 0.05°
PARALLELISM, ECCENTRICITY AND SYMMETRY ABOUT ALL CENTER LINES = +/-0.005"
- 5) UNITS: INCHES UNLESS OTHERWISE NOTED
- 6) IDENTIFICATION: N/A
- 7) ASSEMBLE AS SHOWN
- 8) POSITION ITEM -3 AS SHOWN WITH TEXT FACING OUT
- 9) REMOVE ALL WELD SPATTERS
- 10) FILL ENGRAVING WITH YELLOW PAINT AFTER ANODIZE
- 11) FILL ENGRAVING WITH WHITE PAINT AFTER ANODIZE

DESIGN	VM	DART AEROSPACE LTD
DRAWN	VM	HAWKESBURY, ONTARIO, CANADA
CHECKED	ML	
MFG. APPR.	FK	
APPROVED	WJ	
DATE 2019-06-24		REV. B
TOOL PART # RB PWC64211		SHEET 3 OF 12
TITLE ENGINE HOIST		SCALE NTS

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8 7 6 5 4 3 2 1



NOTES:

- 1) MATERIAL: 6061-T6
- 2) HEAT TREAT: N/A
- 3) FINISH: N/A
- 4) TOLERANCES: X.X = +/- 0.1" / +/- 1°
X.XX = +/- 0.01" / +/- 0.5°
X.XXX = +/- 0.005" / +/- 0.1°
X.XXXX = +/- 0.0005" / +/- 0.05°
PARALLELISM, ECCENTRICITY AND SYMMETRY ABOUT ALL CENTER LINES = +/- 0.005"
- 5) UNITS: INCHES UNLESS OTHERWISE NOTED
- 6) REMOVE ALL SHARP EDGES AND BURRS
- 7) IDENTIFICATION: MACHINE ENGRAVE AS SHOWN

DESIGN	VM	DART AEROSPACE LTD
DRAWN	VM	HAWKESBURY, ONTARIO, CANADA
CHECKED	ML	
MFG. APPR.	FK	REV. B
APPROVED	WJ	SHEET 4 OF 12

TOOL PART # RB PWC64211
 TITLE ENGINE HOIST
 DATE 2019-06-24
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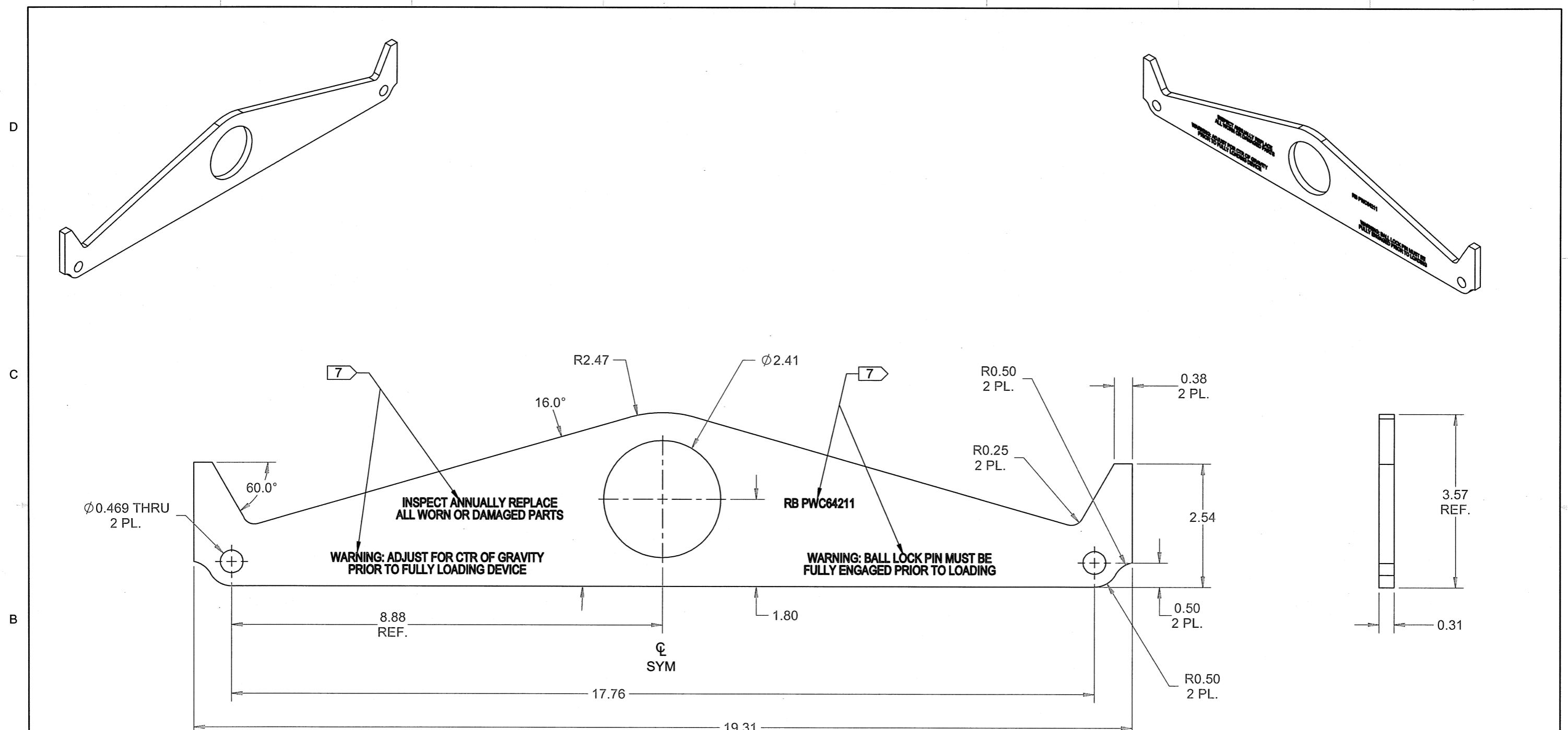
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NOTES:

- 1) MATERIAL: 6061-T6
- 2) HEAT TREAT: N/A
- 3) FINISH: N/A
- 4) TOLERANCES: X.X = +/- 0.1" / +/- 1°
X.XX = +/- 0.01" / +/- 0.5°
X.XXX = +/- 0.005" / +/- 0.1°
X.XXXX = +/- 0.0005" / +/- 0.05°
PARALLELISM, ECCENTRICITY AND SYMMETRY ABOUT ALL CENTER LINES = +/- 0.005"
- 5) UNITS: INCHES UNLESS OTHERWISE NOTED
- 6) REMOVE ALL SHARP EDGES AND BURRS
- 7) IDENTIFICATION: MACHINE ENGRAVE AS SHOWN

DESIGN	VM	DART AEROSPACE LTD	
DRAWN	VM	HAWKESBURY, ONTARIO, CANADA	
CHECKED	ML		
MFG. APPR.	FK		
APPROVED	<i>WJ</i>		
TOOL PART #		REV. B	
RB PWC64211		SHEET 5 OF 12	
TITLE		SCALE	
ENGINE HOIST		NTS	
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DATE 2019-06-24

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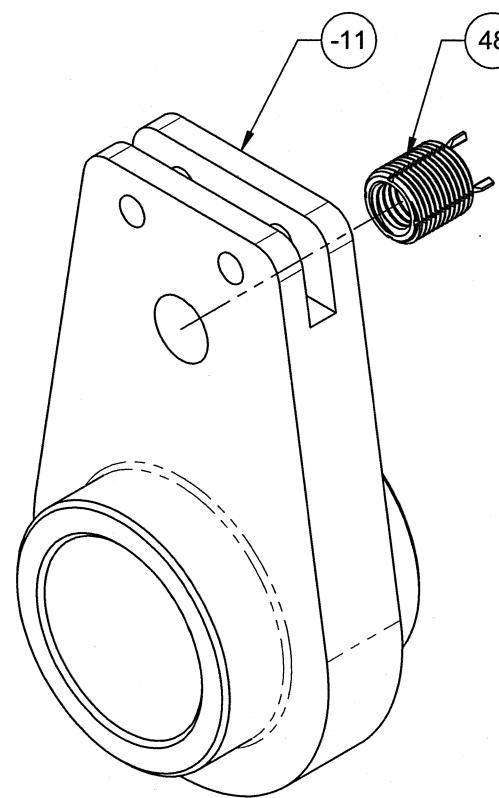
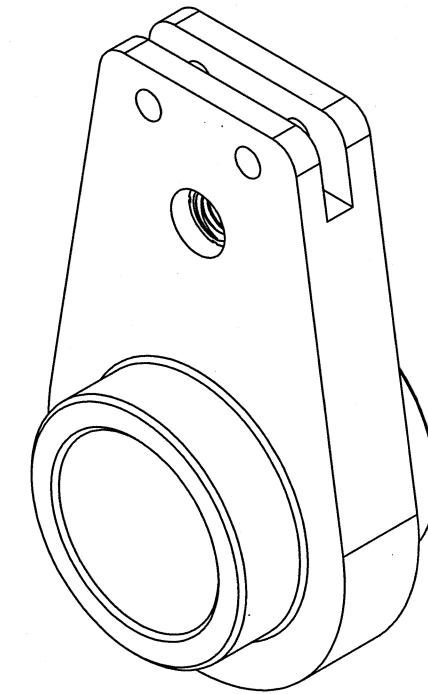
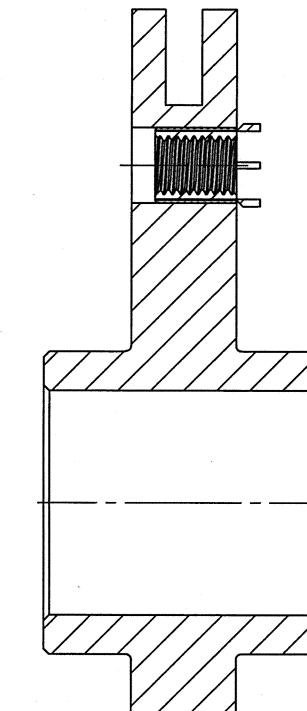
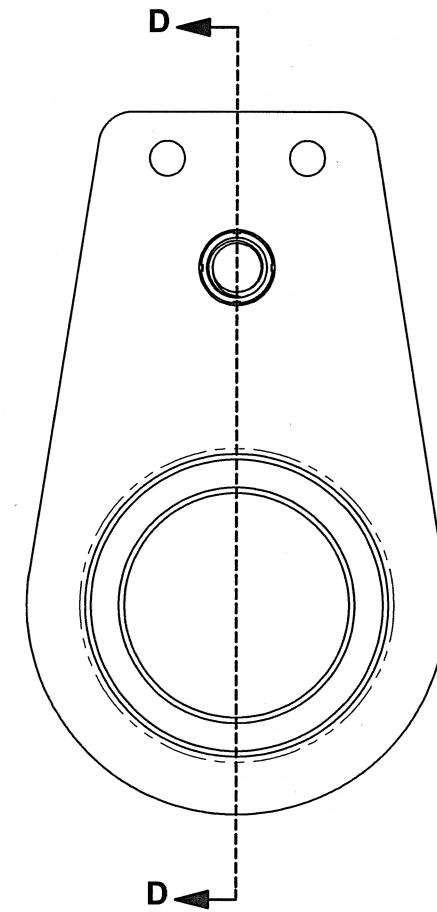
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ITEM #	QTY	PART #	PART TITLE
-11	1	RB PWC64211-11	LIFT
48	1	McMaster#90245A038 OR EQUIV	BLACK PHOSPHATE STEEL KEY-LOCKING INSERT 5/8"-11

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**RB PWC64211-9 LIFT ASSY**

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NOTES:

- 1) MATERIAL: N/A
- 2) HEAT TREAT: N/A
- 3) FINISH: N/A
- 4) TOLERANCES: X.X = +/- 0.1" / +/- 1°
X.XX = +/- 0.01" / +/- 0.5°
X.XXX = +/- 0.005" / +/- 0.1°
X.XXXX = +/- 0.0005" / +/- 0.05°
PARALLELISM, ECCENTRICITY AND SYMMETRY ABOUT ALL CENTER LINES = +/- 0.005"
- 5) UNITS: INCHES UNLESS OTHERWISE NOTED
- 6) IDENTIFICATION: N/A
- 7) ASSEMBLE AS SHOWN

DESIGN	VM	DART AEROSPACE LTD
DRAWN	VM	HAWKESBURY, ONTARIO, CANADA
CHECKED	ML	
MFG. APPR.	FK	REV. B
APPROVED	Wf	TOOL PART #
		RB PWC64211
		TITLE
		ENGINE HOIST
DATE 2019-06-24		SCALE NTS
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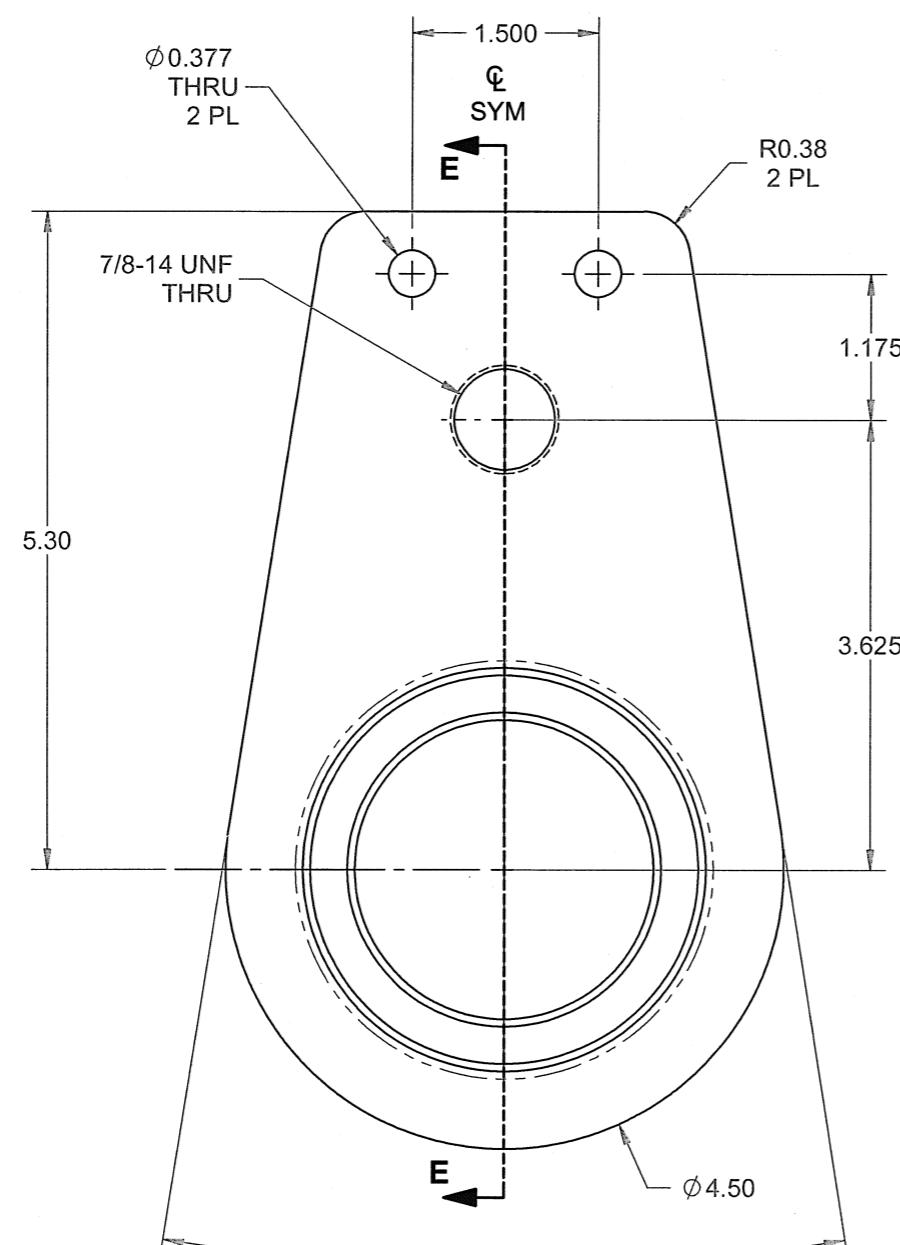
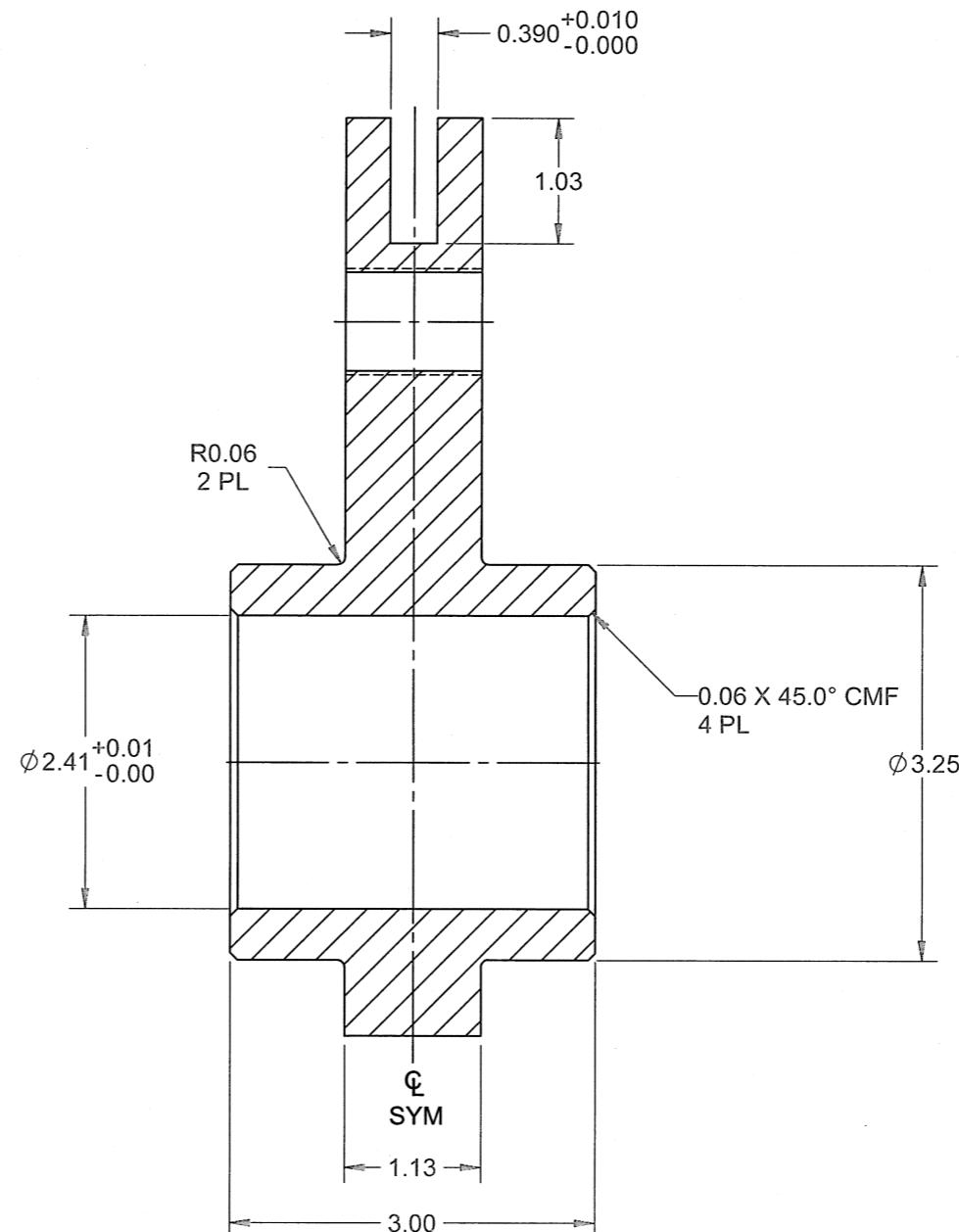
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**RB PWC64211-11 LIFT****SECTION E-E****NOTES:**

- 1) MATERIAL: 6061-T6
- 2) HEAT TREAT: N/A
- 3) FINISH: ANODIZE BLACK PER MIL-A-8625 TYPE 2 CLASS 2
- 4) TOLERANCES: X.X = +/- 0.1" / +/- 1°
X.XX = +/- 0.01" / +/- 0.5°
X.XXX = +/- 0.005" / +/- 0.1°
X.XXXX = +/- 0.0005" / +/- 0.05°
PARALLELISM, ECCENTRICITY AND SYMMETRY ABOUT ALL CENTER LINES = +/- 0.005"
- 5) UNITS: INCHES UNLESS OTHERWISE NOTED
- 6) REMOVE ALL SHARP EDGES AND BURRS
- 7) IDENTIFICATION: N/A

DESIGN	VM	DART AEROSPACE LTD
DRAWN	VM	HAWKESBURY, ONTARIO, CANADA
CHECKED	ML	
MFG. APPR.	FK	
APPROVED	WJ	
TOOL PART #	RB PWC64211	REV. B
TITLE	ENGINE HOIST	SHEET 7 OF 12
DATE	2019-06-24	SCALE NTS

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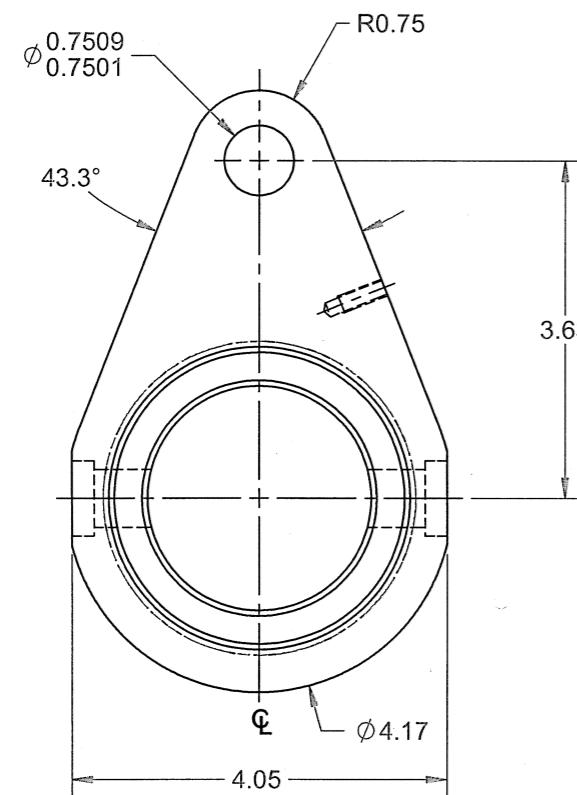
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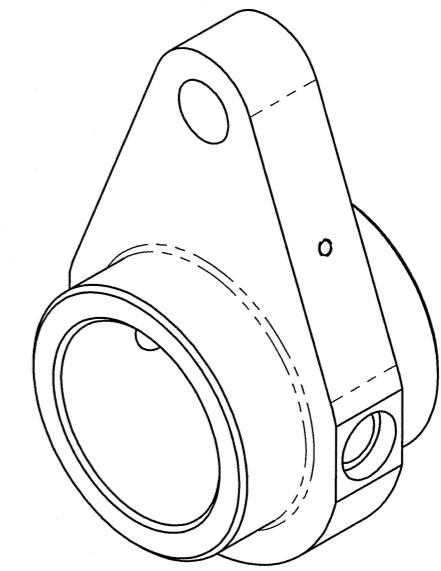
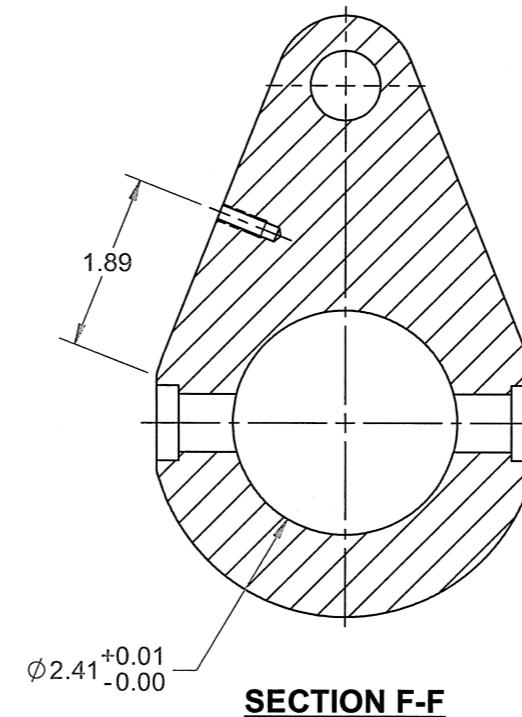
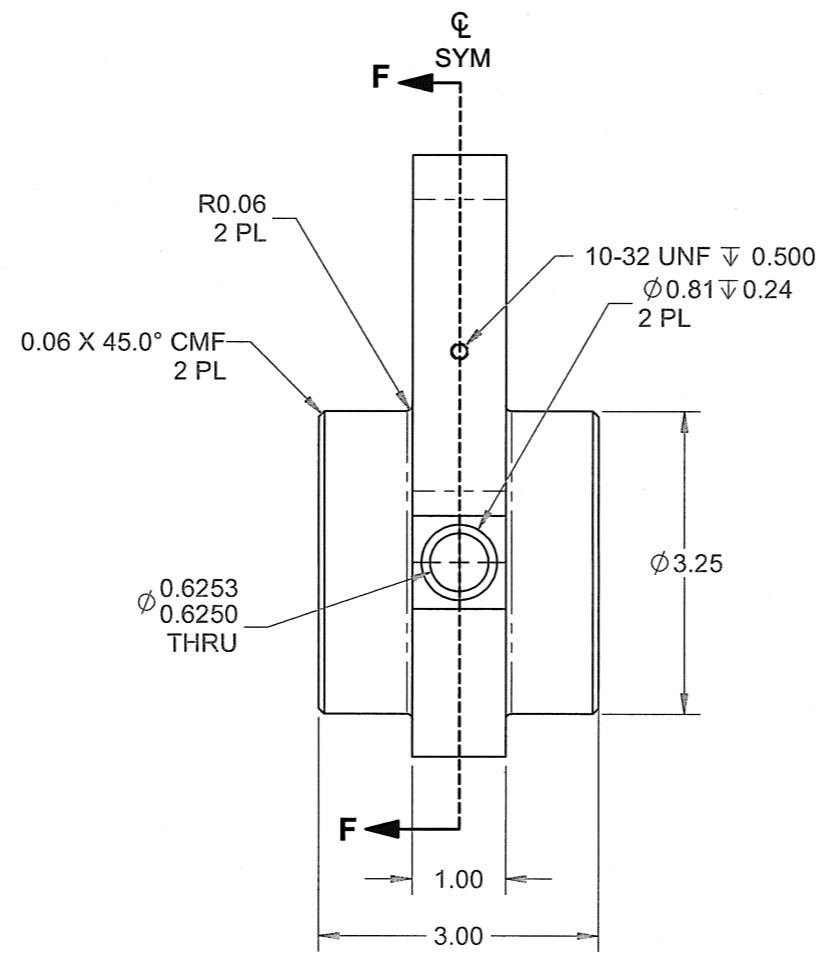
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RB PWC64211-17 ANCHOR



NOTES:

- 1) MATERIAL: 6061-T6
- 2) HEAT TREAT: N/A
- 3) FINISH: ANODIZE BLACK PER MIL-A-8625 TYPE 2 CLASS 2
- 4) TOLERANCES: X.X = +/- 0.1" / +/- 1°
X.XX = +/- 0.01" / +/- 0.5°
X.XXX = +/- 0.005" / +/- 0.1°
X.XXXX = +/- 0.0005" / +/- 0.05°
PARALLELISM, ECCENTRICITY AND SYMMETRY ABOUT ALL CENTER LINES = +/- 0.005"
- 5) UNITS: INCHES UNLESS OTHERWISE NOTED
- 6) REMOVE ALL SHARP EDGES AND BURRS
- 7) IDENTIFICATION: N/A

DESIGN	VM	DART AEROSPACE LTD
DRAWN	VM	HAWKESBURY, ONTARIO, CANADA
CHECKED	ML	
MFG. APPR.	FK	REV. B
APPROVED	VJ	TOOL PART #
		RB PWC64211
		TITLE
		ENGINE HOIST
DATE 2019-06-24		SCALE NTS

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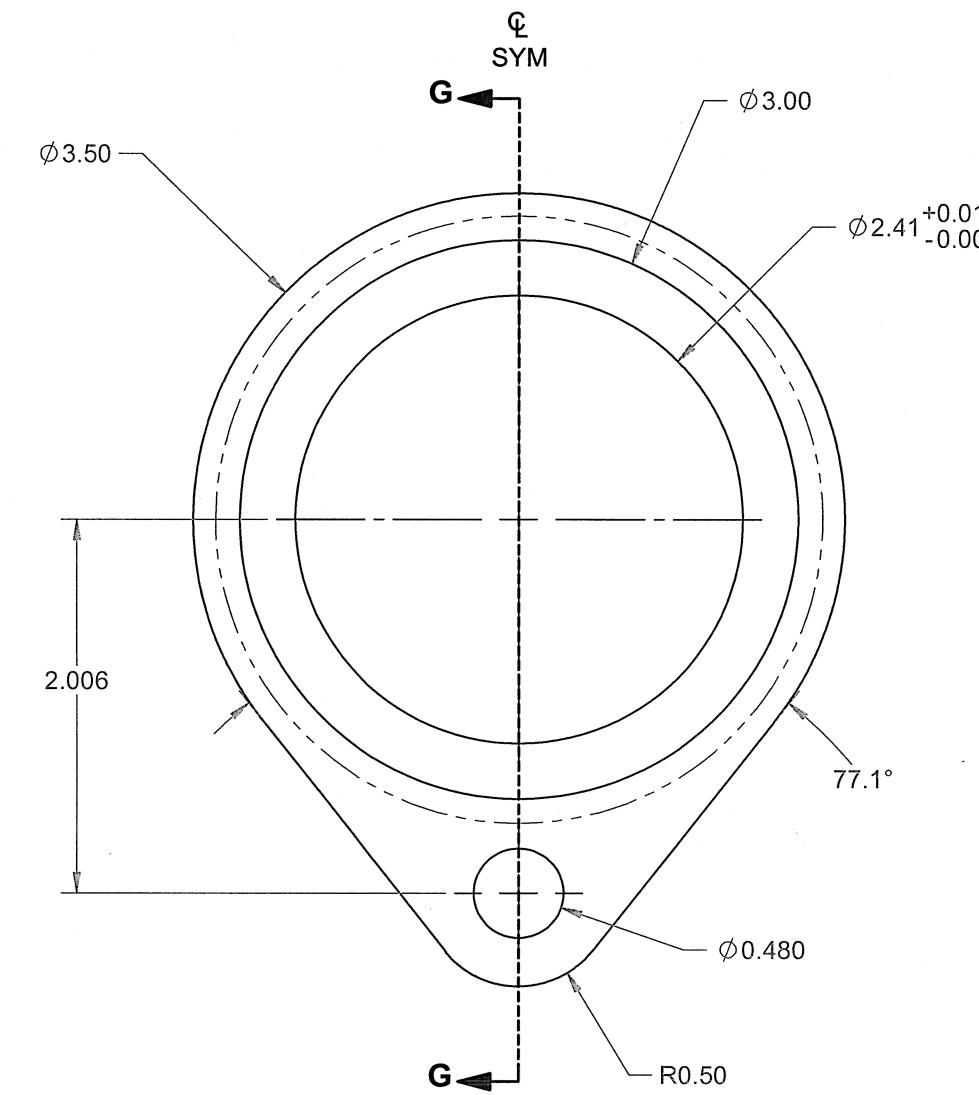
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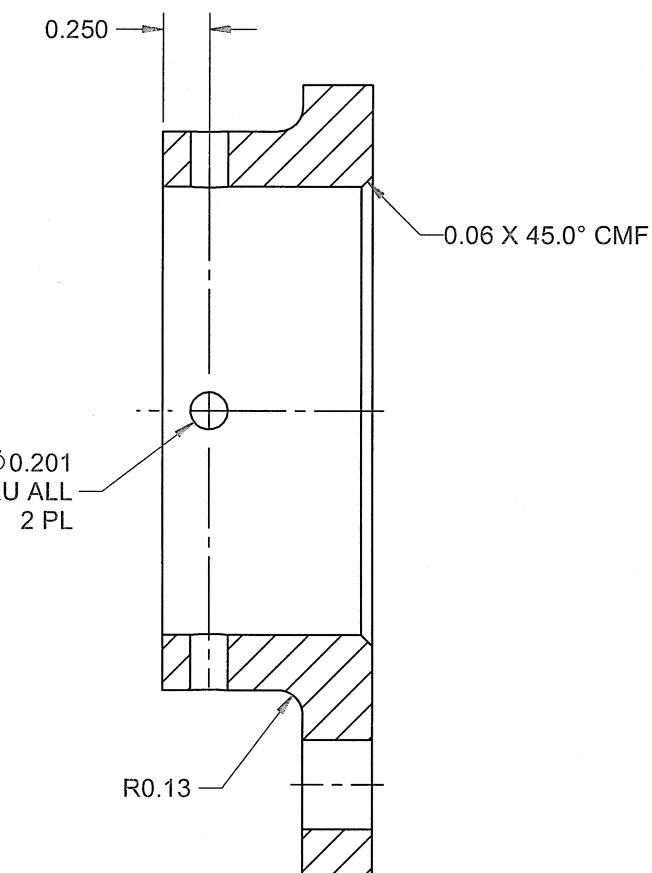
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RB PWC64211-19 FRAME AFT END



SECTION G-G

NOTES:

- 1) MATERIAL: 6061-T6
- 2) HEAT TREAT: N/A
- 3) FINISH: ANODIZE BLACK PER MIL-A-8625 TYPE 2 CLASS 2
- 4) TOLERANCES: X.X = +/- 0.1" / +/- 1°
X.XX = +/- 0.01" / +/- 0.5°
X.XXX = +/- 0.005" / +/- 0.1°
X.XXXX = +/- 0.0005" / +/- 0.05°
PARALLELISM, ECCENTRICITY AND SYMMETRY ABOUT ALL CENTER LINES = +/- 0.005"
- 5) UNITS: INCHES UNLESS OTHERWISE NOTED
- 6) REMOVE ALL SHARP EDGES AND BURRS
- 7) IDENTIFICATION: N/A

DESIGN DRAWN	VM VM	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA
CHECKED	ML	TOOL PART #
MFG. APPR.	FK	RB PWC64211
APPROVED	VJL	TITLE
		ENGINE HOIST
DATE	2019-06-24	SCALE
		NTS

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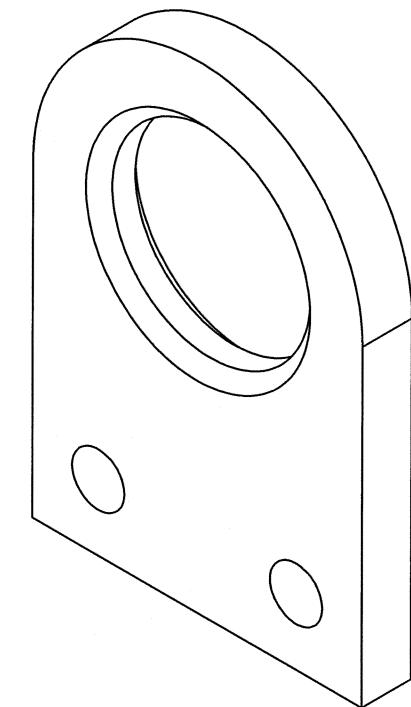
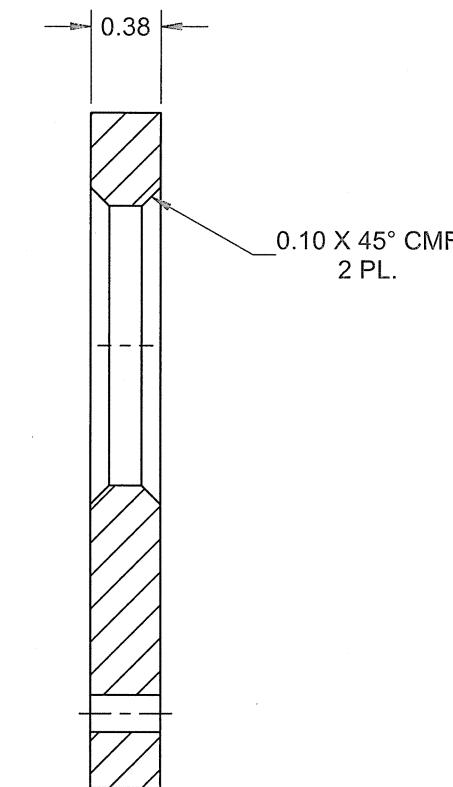
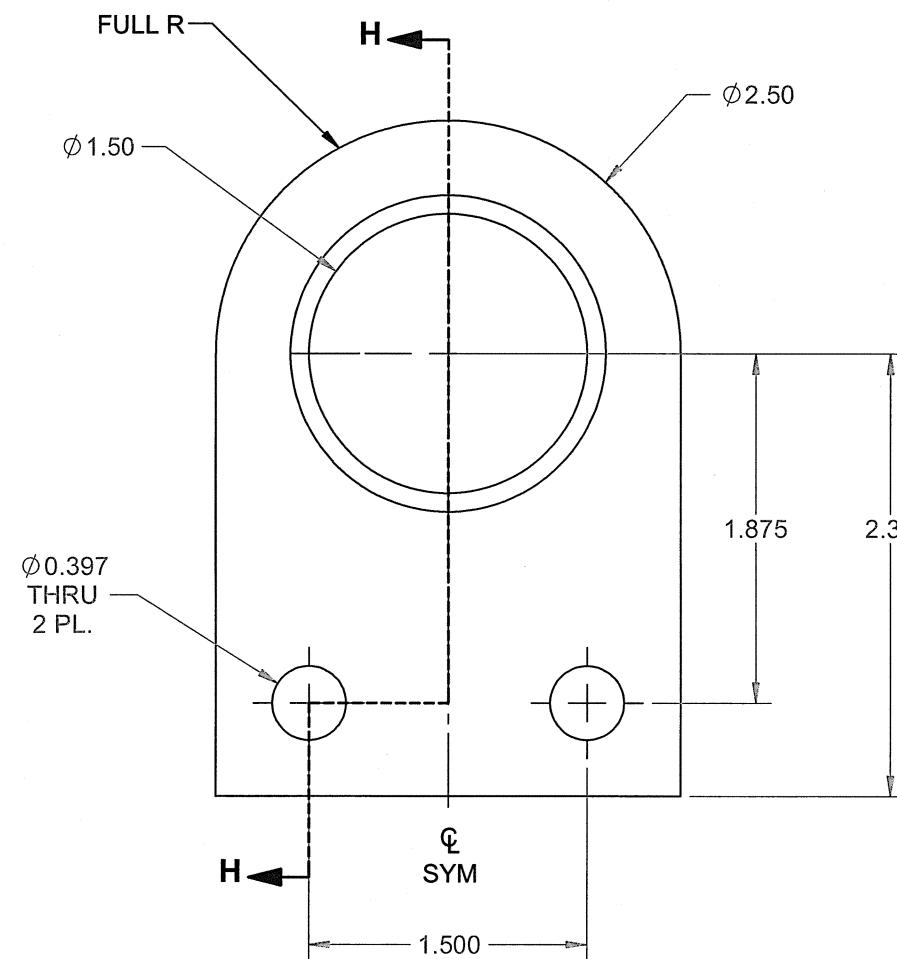
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SECTION H-HRB PWC64211-21 ENGINE HOIST

NOTES:

- 1) MATERIAL: 1018/1020/1025 CR
- 2) HEAT TREAT: N/A
- 3) FINISH: BLACK OXIDE PER MIL-C-13924 CLASS 1 THEN APPLY A THIN LAYER OF OIL / CPC PER MIL-PRF-16173 GRADE 3 CLASS 1 OR MIL-C-81309 TYPE III OR MIL-C-23411A OR MIL-PRF-81309 AND WIPE OFF EXCESS
- 4) TOLERANCES: X.X = +/- 0.1" / +/- 1°
X.XX = +/- 0.01" / +/- 0.5°
X.XXX = +/- 0.005" / +/- 0.1°
X.XXXX = +/- 0.0005" / +/- 0.05°
PARALLELISM, ECCENTRICITY AND SYMMETRY ABOUT ALL CENTER LINES = +/- 0.005"
- 5) UNITS: INCHES UNLESS OTHERWISE NOTED
- 6) REMOVE ALL SHARP EDGES AND BURRS
- 7) IDENTIFICATION: N/A

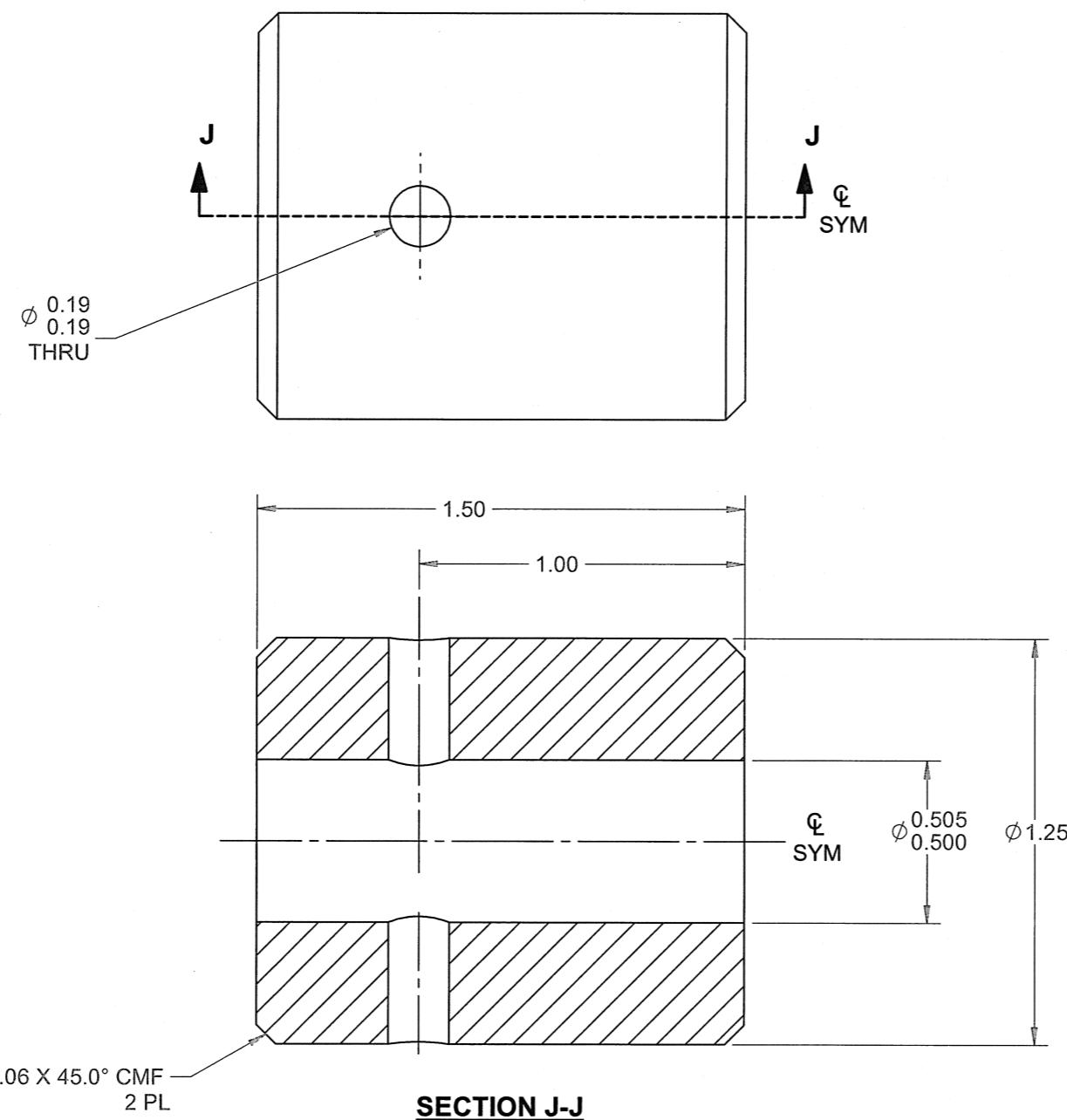
DESIGN	VM	DART AEROSPACE LTD
DRAWN	VM	HAWKESBURY, ONTARIO, CANADA
CHECKED	ML	
MFG. APPR.	FK	REV. B
APPROVED	WJ	TOOL PART #
		RB PWC64211
		TITLE
		ENGINE HOIST
DATE	2019-06-24	SCALE
		NTS

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RB PWC64211-23 KNOB

NOTES:

- NOTES:

 - 1) MATERIAL: 1018/1020/1025 CR
 - 2) HEAT TREAT: N/A
 - 3) FINISH: BLACK OXIDE PER MIL-C-13924 CLASS 1 THEN APPLY A THIN LAYER OF OIL / CPC PER MIL-PRF-16173 GRADE 3 CLASS 1 OR MIL-C-81309 TYPE III OR MIL-C-23411A OR MIL-PRF-81309 AND WIPE OFF EXCESS
 - 4) TOLERANCES: X.X = +/- 0.1" / +/- 1°
X.XX = +/- 0.01" / +/- 0.5°
X.XXX = +/- 0.005" / +/- 0.1°
X.XXXX = +/- 0.0005" / +/- 0.05°
PARALLELISM, ECCENTRICITY AND SYMMETRY ABOUT ALL CENTER LINES = +/- 0.005"
 - 5) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 6) REMOVE ALL SHARP EDGES AND BURRS
 - 7) IDENTIFICATION: N/A

DESIGN	VM	DART AEROSPACE LTD	
DRAWN	VM	HAWKESBURY, ONTARIO, CANADA	
CHECKED	ML	TOOL PART #	REV. B
MFG. APPR.	FK	RB PWC64211	SHEET 11 OF 12
APPROVED	<i>Vf</i>	TITLE	SCALE
DATE	2019-06-24	ENGINE HOIST	NTS

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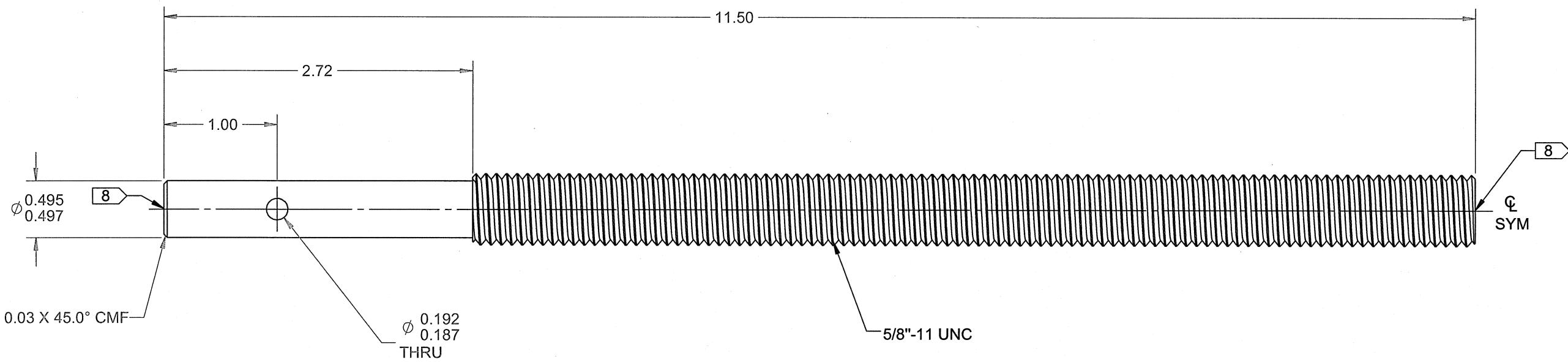
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RB PWC64211-25 SCREW

NOTES:

- 1) MATERIAL: McMaster#98957A501 OR EQUIV (GRADE B7 STEEL THREADED ROD 5/8"-11 X 1' LG.)
- 2) HEAT TREAT: N/A
- 3) FINISH: BLACK OXIDE PER MIL-C-13924 CLASS 1 THEN APPLY A THIN LAYER OF OIL / CPC PER MIL-PRF-16173 GRADE 3 CLASS 1 OR MIL-C-81309 TYPE III OR MIL-C-23411A OR MIL-PRF-81309 AND WIPE OFF EXCESS
- 4) TOLERANCES: X.X = +/- 0.1" / +/- 1°
X.XX = +/- 0.01" / +/- 0.5°
X.XXX = +/- 0.005" / +/- 0.1°
X.XXXX = +/- 0.0005" / +/- 0.05°
PARALLELISM, ECCENTRICITY AND SYMMETRY ABOUT ALL CENTER LINES = +/- 0.005"
- 5) UNITS: INCHES UNLESS OTHERWISE NOTED
- 6) REMOVE ALL SHARP EDGES AND BURRS
- 7) IDENTIFICATION: N/A
- 8) CENTER DRILL IS ACCEPTABLE

DESIGN	VM	DART AEROSPACE LTD
DRAWN	VM	HAWKESBURY, ONTARIO, CANADA
CHECKED	ML	REV. B
MFG. APPR.	FK	SHEET 12 OF 12
APPROVED	<i>[Signature]</i>	SCALE NTS

TOOL PART # RB PWC64211
TITLE ENGINE HOIST
DATE 2019-06-24

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